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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,784	02/06/2004	Lee D. Whetsel	TI-19785D.2	7910
23494	7590	03/08/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			NGUYEN, STEVE N	
			ART UNIT	PAPER NUMBER
			2138	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/773,784

Applicant(s)

WHETSEL, LEE D.

Examiner

Steve Nguyen

Art Unit

2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 2-7 are currently pending. Claim 1 is cancelled.

#### ***Specification***

2. The amended abstract and title are accepted. The objections to the abstract in the prior Office Action are withdrawn.

#### ***Double Patenting***

3. Claim 1 has been cancelled by Applicant. Therefore the double patenting rejection is moot.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claim 2 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "normal" in claim 2 is a relative term which renders the claim indefinite. The term "normal" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is impossible to ascertain the degree of normality as claimed in claim 2. For example, on page 11, lines 15-16 of the specification the Applicant states that the IC is in normal mode during a sample test operation. Conversely in claim 3, a preload scan operation provides the normal operation mode.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 2-5 rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al (US Pat. 5,281,864; hereinafter referred to as Hahn).

As per claim 2:

Hahn teaches a process of initializing the state of an output memory circuit of a scan cell located at the boundary of a logic circuit within an integrated circuit having a logic circuit comprising:

- A. scanning data into an input memory circuit of the cell while maintaining the cell in a first mode providing normal operation of the logic circuit (col. 3, line 68 to col. 4, lines 1-7);
- B. placing the cell in a second mode that disables normal operation of the logic circuit (col. 4, lines 7-11); and
- C. transferring the data scanned into the input memory circuit into the output memory circuit simultaneous with the placing the cell in a mode that disables normal operation of the logic circuit (col. 4, lines 7-11).

Although Hahn does not explicitly disclose initializing the state of the output memory, one of ordinary skill in the art at the time the invention would have recognized that the output memory would be initialized to the value that is latched into flip-flop 36 in Fig. 5.

As per claim 3:

Hahn teaches the process of claim 2 in which the first mode is a preload scan operation and the second mode is a test operation (col. 3, line 68 to col. 4, lines 1-11).

As per claim 4:

Hahn further teaches the process of claim 2 in which the first memory circuit is a capture/shift memory circuit (col. 3, lines 47-51).

As per claim 5:

Hahn further teaches the process of claim 2 in which the second memory circuit is a latchable buffer circuit (Fig. 5, flip-flop 36 is a latchable buffer circuit).

7. Claims 6 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn in view of Terzian (US Pat. 4,831,623).

As per claim 6:

Hahn teaches the process of claim 2 above. Not explicitly disclosed by Hahn is the maintaining includes enabling a first transmission gate between the logic circuit and the output memory circuit and disabling a second transmission gate between the input memory circuit and the output memory circuit.

However, Hahn teaches maintaining operational modes by use of multiplexers 54 and 56 shown in Fig. 5. Terzian in an analogous art teaches that a multiplexer can be realized by transmission gates (col. 6, lines 14-15). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use transmission gates in the system of Hahn. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that a multiplexer could have been realized by transmission gates, as disclosed by Terzian in col. 6, lines 14-15.

As per claim 7:

Hahn teaches the process of claim 2 above. Not explicitly disclosed by Hahn is that the placing includes disabling a first transmission gate between the logic circuit and the output memory circuit and enabling a second transmission gate between the input memory circuit and the output memory circuit.

However, Hahn teaches maintaining operational modes by use of multiplexers 54 and 56 shown in Fig. 5. Terzian in an analogous art teaches that a multiplexer can be realized by transmission gates (col. 6, lines 14-15). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use transmission gates in the system of Hahn. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that a multiplexer could have been realized by transmission gates, as disclosed by Terzian in col. 6, lines 14-15.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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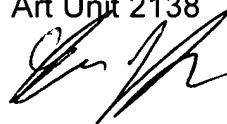
shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Nguyen whose telephone number is (571) 272-7214. The examiner can normally be reached on M-F, 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steve Nguyen  
Examiner  
Art Unit 2138



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